

## The Sun Factory: “building the sustainable solar future”

Mr Klaas Jetze Hoekstra, CEO and managing director of a small fast growing Dutch company, explains how solar energy can be competitive and contribute to more sustainable initiatives, such as a water purification unit for southern countries.



### *A different approach to solar energy and business*

- **Tell us about The Sun Factory, in a few words and with some key figures.**

The Sun Factory was founded in 2001 in The Netherlands, and operates from its base in Amsterdam. Besides this office we have 2 other offices in the Netherlands, and also in Spain and Germany.

So, we are an international company that offers customers solar energy solutions in Europe, Africa and America through a global dealer network.

We develop and install grid-connected or autonomous solar (Photo Voltaic) energy systems and solar water purification systems.

Our total group employs 50 people. The turnover of The Sun Factory was about 8 million Euros in 2005 and will grow to 16 million in 2006. The company has no overheads and all the activities are based on outsourcing.



- **What are the main activities of The Sun Factory?**

A solar power system consists of one or more solar panels (photovoltaic cells), a control unit, a storage medium or grid connection and accompanying appliances.

We offer turn-key solar energy systems, covering all aspects of design, installation and maintenance.

In addition to producing our own solar panel designs, we also distribute solar inverters, batteries, chargers, solar regulators, solar panels and water purification systems by reputable manufacturers such as Sharp, Solarworld, Solarwatt, Mastervolt, Phocos and Nedap.

- **Can you give us some examples of original applications?**

The Sun Factory has installed, for example, 360 grid connected Solar systems on existing houses in Holland but also at schools, new buildings and so on. Besides this, we have supplied 9000 small grid connected solar systems to consumers as “do it yourself” kits.

Another market is autonomous systems - we supply energy at locations where there is no energy. For example, private houses in rural areas or energy systems on boats or monitoring systems at sea. An important market for this is now Spain and Africa.

- **In which situations do you recommend using Solar energy?**

We believe in the great potential of Renewable Energies.

Solar energy systems can be combined with other energy sources to create the most economical energy supply possible at any given location. There are globally 2 markets, one the grid connected solar systems market and the second the stand-alone solar market. The grid connected market is mainly based on producing energy and selling this energy to the Utility and the autonomous systems are necessary at locations where there is no energy, like rural areas in developing countries.

- **Nowadays, many people are trying to play in the field of renewable energies; what is your approach to solar energy?**

A responsible approach towards energy needs clearly depends on a thorough understanding of the various technologies involved, knowledge of the potential applications and of the system's end users.

Over the years, our company has acquired extensive and unique expertise in stand-alone systems, grid-connected systems, innovative and special products and project consultancy.

We are lucky enough to have specialists with years of experience, who can provide tailor-made solutions, which is often necessary to satisfy the needs of our customers: energy companies, project developers, municipal authorities, architects, businesses and consumers.

That's how we can be competitive: we support our clients by obtaining the best solution for their electricity needs, and by providing good "value for money solutions".

- **Can solar energy really be "sustainable"?**

Yes. We consider photovoltaic (PV) and solar power, together with wind energy, to be one of the most important sustainable sources of energy, today and for the future.

Solar power systems offer an independent, clean, reliable and often economical source of energy. Each time the choice is made to install solar power, it is a contribution to a more sustainable society.

A choice which is made more and more frequently, with a vision of all the costs and services, and of the future - this is sustainability.

### ***Naiade: an eco-innovation for sustainable drinking water in the South***

- **Can you tell us about Naiade eco-innovation history?**

'Naiade' is a water purification unit that was created by Nedap in Groenlo (NL) together with other business partners. The main goal of this product is to help people in developing countries save water.

Nedap in Groenlo also manufactures the unit.

In 2004, Naiade won a European Business Award for the Environment for its sustainability and usefulness for the poorest communities. The European Commission jury concluded that the Naiade system has a "massive potential in the battle against water-borne diseases, particularly in remote areas in the developing world"

The Sun Factory is the main distributor of the Naiade in Africa and South America.



- **How does it work?**

Water is poured in a container at the top of the Naiade unit. The water passes a filter (washable bags). It flows through a valve in which UV light deactivates pathogens (viruses, bacteria, protozoa and worm eggs). Thereafter, drinking-water for human consumption is available from the tap. A solar panel produces the required energy. The Naiade unit has a process capacity of approximately 3000 litres of water per day.



- **What are the applications and advantages of Naiade?**

Water can be obtained from canals, rivers, lakes or tapped from piped-networks.

The unit is stand-alone, requires no maintenance other than washing the filters and keeping the system, including its PV solar panels, clean. The UV lamp needs to be replaced after approximately 10.000 hours of operation. The Naiade units do not treat chemical contaminants. For this reason, the water input sources need to be examined by laboratory analysis at regular intervals.

The units provide water according to WHO standards, are installed within one hour, and can be used anywhere since no fossil fuel is required. The weight of a unit (including export packaging) is only 75 kg and it is packed ready-to-use, in a palletised box. A standard 20 foot sea-container contains 20 units.

The unit was tested by UNESCO-IHE and KIWA (an independent certification and research organisation in the Netherlands).

A single unit can provide 250 to 400 people with their daily requirement of safe drinking water, at a cost of 0.15 € per person per month for an estimated 10 years!

- **What are the prospects for implementing Naiade?**

You know, dirty water is a major cause of health problems in the south. NGOs say 80% of all illnesses in developing countries are caused by polluted water.

So we believe that Naiade can be a solution.

Projects and countries which are in the initial phase of installing Naiade are Mali, Tanzania, Sudan, Ghana, Morocco, Columbia and Suriname.

At this moment, a few hundred units have been installed in a few countries and there is a lot of interest in Tanzania, Sudan, Ghana, India and China.

The Naiade water purification unit has a “massive potential in the battle against water-borne diseases, particularly in remote areas in the developing world”, and it works thanks to solar energy!

Contact:

Klaas Jetze Hoekstra  
The Sun Factory  
Snijdersbergweg 93 - 1105 AN, Amsterdam, The Netherlands  
Tel:+31 20 3422137 Fax:+31 20 3422138  
E-mail [kjh@the-sun-factory.com](mailto:kjh@the-sun-factory.com)

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